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The Dismantling of the Septizonium – a Rational, Utilitarian and Economic Process?

Summary

The article examines the processes involved in dismantling the Septizonium and transporting its building materials, peperino stones, to one of several sites – in this case the *lavatore del Termine*. References to other materials and sites such as the *casa dei mendicanti* are only made to support the main thesis that this was a case of rational, economical and utilitarian re-use. The main sources used were the *conto misura et stima* of Domenico Fontana and the transportation libretto of Giovan Pietro. The article focuses on the dismantling process itself, the time and materials it required, the working process, economic effort and interim storage. Transportation aspects are examined in terms of volumetric masses for transportation, mobility and destination routes in the incipient Sistine street system.

Keywords: Septizonium; re-use; building materials; transportation; Sistine street system; Domenico Fontana; Sixtus V.

Thema des Artikels sind die Arbeits-, Transport- und Lagerungsprozesse, die sich bei der Niederlegung des antiken römischen Septizoniums ereigneten. Die Beispiele der Verbringung der Baumaterialien Peperin, Travertin und Marmor vom Septizonium zu verschiedenen Bauplätzen wie etwa der *lavatore del Termine* unterstützen die Hauptthese des Artikels. Diese lautet, dass die Wiederverwendung und der Wiederverbau der freigewordenen Baumaterialien des Septizoniums auf rationalen, ökonomischen und utilitaristischen Gründen beruhen. Hauptquellen sind das *conto misura et stima* Domenico Fontanas und das Transportlibretto des Giovan Pietro. Der Artikel behandelt den Prozess der Niederlegung, die Arbeitsprozesse, die Arbeitsökonomie und die Zwischenlagerung. Die Frage des Transports der Baumaterialien wird anhand volumetrischer Angaben und der Bewegung durch das neu angelegte Sixtinische Straßensystem analysiert.

Keywords: Septizonium; Wiederverwendung; Baumaterialien; Transport; Sixtinisches Straßensystem; Domenico Fontana; Sixtus V.

1 Introduction

The dismantling of the Severan Septizonium at the southwestern foot of the Palatine Hill began – as Enrico Stevenson has shown – in March 1588. The *Vita di Sisto V* reports that “nel Settizonio di Severo per 14 mesi ha fatto continuamente cauar marmi”. Thus, the monument was destroyed completely in April 1589.¹

The first step was to dismantle the monument as documented in the *conto* of Domenico Fontana of 1589 in the *Archivio Segreto Vaticano*.² Next, the pieces of the Septizonium that had been stored in the interim were transported from the site to their final destinations, where they were reused as spolia. Part of this transport is documented in the *libretto* of Gio(vanne) Pietro, *carrettiere di marmi*, carter of marbles, of 1589 in the *Archivio di Stato di Roma*.³

The following seeks to cast light on two aspects: the first point is the process by which the ancient Septizonium was dismantled in Rome. The Vatican documents of Domenico Fontana will be consulted regarding working processes, dismantled material, time, working effort and interim storage of the material.

The second aspect concerns the transport of the spolia to their final destination sites. Not all sites where material from the Septizonium was reused are mentioned, due to the limited scope of this essay. I will restrict my observations exclusively to those sites which are named in the *libretto* of the marble carter Gio(vanne) Pietro.

Before going into detail about the dismantling process itself, I will first consider what was left of the ancient monument to dismantle. The Septizonium, or as labeled in the *Forma Urbis Romae*, the Septizodium⁴ of Septimius Severus, was dedicated in 203. All that remained of it in the 16th century was its former east wing. So it is depicted, e.g. in a drawing by Giovannantonio Dosio in the second half of the sixteenth century (Fig. 1).

As indicated in the Severan marble plan of the *Forma Urbis Romae* (Fig. 2) the monument's ground plan originally consisted of three main *exedrae* and two side wings (*versurae*), decorated with marble, granite and porphyry columns on the front facade.⁵ An archaeological reconstruction by Christian Hülsen (Fig. 3) reveals that the structure

1 Stevenson 1888, 275, n. 2.

2 *Archivio Segreto Vaticano* (ASV), *Conti di Sisto V*, Capsa 10.108, fasc. II, fol. 9–11; transcribed by Bertolotti 1886, 87 (cf. Lanciani 1961, 185; Jordan 1907, 103); Stevenson 1888, 272–274; Petersen 1910, 58–59 (sections 4–10); Dombart 1922, 131–132.

3 *Archivio di Stato di Roma* (ASR), Camerale I, Giustificazione di Tesoreria, busta 17, fascicolo 8, fol. 1 r.

4 Gorrie 2001, 653: the two terms are interchangeable, since there were found both inscriptions of Septizonium and Septizodium, cf. Carettoni et al. 1960, 67.

5 Fragments 7a and 7b: Stanford Digital Forma Urbis Romae Project 2002–2016, rec. no. 26; Carettoni et al. 1960, 66–67, pl. 17; Rodríguez Almeida 1981, 74–75 pl. 5.



Fig. 1 Giovannantonio Dosio, Septizonium, perspective view from the west, mid 16th century (post 1547 – ante 1570), pen on paper, ink, lavished, 418 x 280 mm, inv. 1774 A r, Uffizi, Firenze.

had three stories of decreasing height, in accordance with the rules of Roman architecture depicted by Vitruvius.⁶ The central section of the monument collapsed as early as the 8th century according to the *Codex Einsidlensis*.⁷ Its western wing was torn down in the Middle Ages.⁸

6 Hülsen 1866, pl. IV: a) perspective view (reconstruction) by Hülsen/Halmhuber; b) ground plan (reconstruction) by Hülsen/Graef (cf. Vitruvius, *De architectura libri decem*).

7 Lusnia 2004, 518: referring to Walser 1987, 88–89 and Iacopi and Tedone 1993, 2; Bartoli 1909, 254.

8 Bartoli 1909, 256; Lusnia 2004, 518; cf. Krautheimer 2000, 149, 322.



Fig. 2 Forma Urbis Romae, Septizonium, ground plan, 3rd century, fragments 7 a, b, c, d, analyzed by the Stanford Project 2002 (ongoing), rec. no. 26.



Fig. 3 Christian Hülsen, reconstruction of the Septizonium, perspective view from the south-west, ground plan, drawing: G. Halmhuber / P. Graef 1886.

2 The status of the Septizonium before its dismantling

Pope Sixtus V commissioned the task of dismantling the Septizonium in 1588 and assigned to his architect Domenico Fontana, who also executed additional projects for Sixtus, such as the water pipeline of Monte Cavallo, the Acqua Felice,⁹ and the erection of the Obelisk of the Circus of Nero in front of New St. Peter's.¹⁰

Our main source of information on the dismantling process is the *Conto di Sisto V* of Capsa 10, today in the *Archivio Segreto Vaticano*.¹¹ It comprises 3 folios and was written by Domenico Fontana, audited by the treasurer Prospero Rocchi and approved by Sixtus V himself. It is dated May 15, 1589 and signed March 22, 1590.

Comparing the written document by Fontana to drawings by Marten van Heemskerck of the Septizonium as it appeared in the 16th century (Fig. 4) clearly reveals that the architect Fontana and the draftsman perceived the monument differently. Marten van Heemskerck depicts the material situation more or less precisely, although the second story wall structures are not too precisely drawn because of the stark lighting – he must have drawn at high noon. Basically he shows the columns as plain and fluted and depicts the rear wall structure of the travertine blocks with holes for the superimposed marble plates, which are now missing. In drawing the second story, which was originally built in the same way, he depicts the medieval brick wall structure with a little side apse tower, a door and windows. He is one of very few to portray the unique round

⁹ Schiffmann 1985, 37–38.

¹⁰ Fontana 1590.

¹¹ *Archivio Segreto Vaticano* (ASV), *Conto di Sisto V*, Capsa 10.108, fasc. II, fol. 9–11; transcribed by Bertolotti

1886 I, 87 (cf. Lanciani 1961, 185; Jordan 1907, 103); Stevenson 1888, 272–274; Petersen 1910, 58–59 (sections 4–10); Dombart 1922, 131–132.

mentioned nowhere in Fontana's report of the dismantling. It may be that the architect in a sense neglected the architectonic impact of the pieces he had dismantled. In his document he concentrates solely on the material of the building and its volume, that is, the quantity of building material. His concentration on volume and material must first and foremost be seen in the context of the payment method: payment was based on the amount of building material dismantled and the amount of the material in the earth that was uncovered and dug up.¹⁴ It should not be forgotten that the *conto* of Fontana is a bill scheduling all stages of the project and not a study documenting every dismantled architectural element. The *conto* only contains separate entries for certain special or characteristic large pieces of marble,¹⁵ layers of peperine and travertine,¹⁶ 18 columns¹⁷ and material that was hard to excavate.¹⁸ Building material such as the medieval brickwork on the second story of the Septizonium is not mentioned because it could not be reused and is therefore worthless in this context.

Two or three decades after Heemskerck completed his drawing, the architect Vincenzo Scamozzi depicted the Septizonium in a drawing dating to the third quarter of the 16th century.¹⁹ He provided full measurements for the monument's elevation (Fig. 6) and for the ground plans of all three stories (Fig. 7). It must be taken into consideration that time had made the Septizonium even more dilapidated, so that documenting the ancient building was especially interesting and important.²⁰

In the drawing inv. Ms. it. cl. IV, 149, fol. 9 v, C (Fig. 7) we can observe in the cassettes of the ceiling on the first story that there is a clear focus on the structures themselves, not on visual effects like depicting light and shadow to generate depth, for example. The architectonic structure of the building elements is important; the goal is exact documentation. All required measurements are given. In the same way the drawing of the elevation, inv. Ms. it. cl. IV, 149, fol. 9 r (Fig. 6) provides measurements of all building elements from the podium to the third story, which Serlio describes as

14 ASV, Capsa 10.108, fasc. II, fol. 10 r/v (1–10): sections 1–10 list the amount of scudi either for the amount of carts of dismantled material or for special classified dismantled material (cornice, fili di peperino, trevertini).

15 Ibid. fol. 10 (2): "tutte le tre cornice di marmo;" ibid. fol. 10 v. (7): "un altro pezzo al paro del detto che faceva la platea simile e faceva resalto verso l'orto".

16 Ibid. fol. 10 (4): "cavato di sotto terra n(umero) 6 fili di peperini;" ibid., fol. 10 v (9): "l'ultimo filo de trevertini".

17 Ibid. fol. 10 (3): "la calatura di n(umero) 18 colonne".

18 Ibid. fol. 10 v (8).

19 Scamozzi, Libro di disegni, Venezia, Biblioteca Marciana, inv. Ms. it. cl. IV, 149, fol. 9 r (elevation), fol. 9 v, A, B, C (ground plans).

20 Campbell 2004, 25–26: Documenting and measuring ancient Roman monuments could have been a special program of the 'Accademia della Virtù' (cf. Kulawik 2002, I, 30–31, 119–126), the drawings of Scamozzi could perhaps be seen as a contribution to this task. Another possibility is that it was an independent project which involved documenting and measuring ancient Roman monuments in cooperation with mostly French artists, architects and draftsmen.

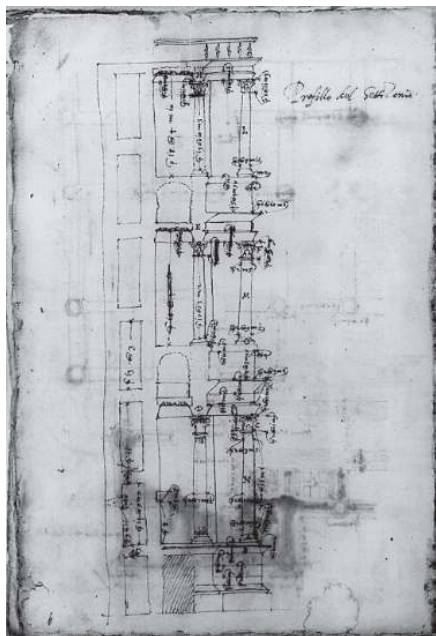


Fig. 6 Vincenzo Scamozzi, Septizonium, elevation, Libro di disegni, Venezia, Biblioteca Marciana, inv. Ms. it. cl. IV, 149, fol. 9 r, second half of the 16th century (post 1559 – ante 1589), pen on paper, ink, accompanying text: “Profillo del SettiZonio”.

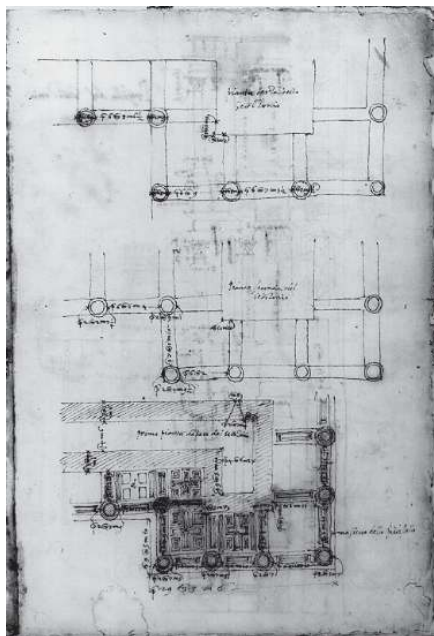


Fig. 7 Vincenzo Scamozzi, Septizonium, ground plan, Libro di disegni, Venezia, Biblioteca Marciana, inv. Ms. it. cl. IV, 149, fol. 9 v, second half 16th century (post 1559 – ante 1589), pen on paper, ink, with inscribed measurements.

being very difficult to reach because there was no intact staircase.²¹ Therefore, the elevation and ground plans by Vincenzo Scamozzi constitute the most complete documentation of the Septizonium from the third quarter of the sixteenth century. But earlier measurements of individual elements of the building also exist, for example the measurements of the bases by Giuliano da Sangallo, Aristotile (Bastiano) da Sangallo or Fra Giocondo.²² Consequently, there is no reason to conclude that as architects' interests and engineering skills increased with time, their rational and technical understanding of ancient monuments and the structures they contained also increased. It makes more sense to speak of a dichotomy between an artistic approach, which aimed to reconstruct the monument, and a technical approach, which sought to measure and document the status of the Septizonium.

21 Serlio 1540, 82, A: “(...) ne anche vestigio di scale per salire ad alto”.

22 Hülsen 1866, 17; 18 fig. 5; Giuliano da Sangallo, Codice Barberiniano Latino, Libro dei Disegni, fol. 71 r, F (end of 15th / beginning of 16th century),

URL: <http://census.bbaw.de/easydb/censusID=60255> (visited on 19/07/2014), (F: 48247); Bastiano da Sangallo, detto Aristotile, inv. Uff. 1749 r, D (post 1530 – ante 1551), Uff.neg. no. 19/22; Pseudo-

When comparing the elevation and ground plans by Vincenzo Scamozzi to the *conto* of Fontana we observe, that both documents create the same impression. But the *conto* of Fontana is first and foremost a bill written for the dismantling of parts of the Septizonium, so it doesn't seek to be as exact and detailed as the scale drawings by Scamozzi in documenting the monument in its present condition.

3 Dismantling the Septizonium: the destruction process

The *conto* of Fontana shows that the building was torn down in two main steps: first, from the upper cornice to the main platform of the first story, and second, from the platform to 29 palmi, or around 6 m, into the ground.²³ These steps were not only constrained by spatial aspects such as volumetric height, but they also involved differing working techniques.

The text starts with the first step, “prima haver calato parte e parte buttato a basso tutti li peperini.”²⁴ “Calato” means to lower pieces of stones and architectural elements like columns from their former place in the building to the ground by mechanical means. The tool used to do this is described in section 2 of the document, “calato a basso con l'argano,”²⁵ or “lowered using a winch”. But simpler techniques were also used in the dismantling process, for example, a large number of peperine stones, the material mainly used in the rear wall, were thrown to the ground as is indicated by the word “buttato”.

The second step is described as “quali pezzi [...] che erano in terra bisogni avatirarli da bandatutti con l'argano”. The pieces of stone in the ground were therefore extracted in small sections using a winch. Since antiquity, winches have served as an important building tool for optimizing, distributing and steering forces. They were often surrounded by wooden scaffolding and supported with ropes.²⁶

By grasping the stone material in the basement with steel hooks – “per dar ganzo acciò si potessero buttare a basso glialtri”²⁷ – the underlying pieces could be cut out in the pit, loosened and pulled up using the winch. This shows that the architect Domenico Fontana used a relatively simple technique, which he optimized by dividing the Septizonium into different sections and following the same logistical pattern in each.

Fra Giocondo, inv. Uff. 1540 A v, D (post 1514 – ante 1521), URL: <http://census.bbaw.de/easydb/censusID=62981> (visited on 19/07/2014) (D: 48249).

23 ASV, Capsa 10.108, fasc. II, fol. 10 (1); 1 palmo romano = 0,223 m.

24 Ibid. fol. 10 (1).

25 Ibid. fol. 10 (2).

26 Giuliano da Sangallo, Roma, Biblioteca Apostolica Vaticana, Codice Barberiniano Latino, Libro dei Disegni, fol. 71 r (upper part of folio).

27 ASV, Capsa 10.108, fasc. II, fol. 10 (1).

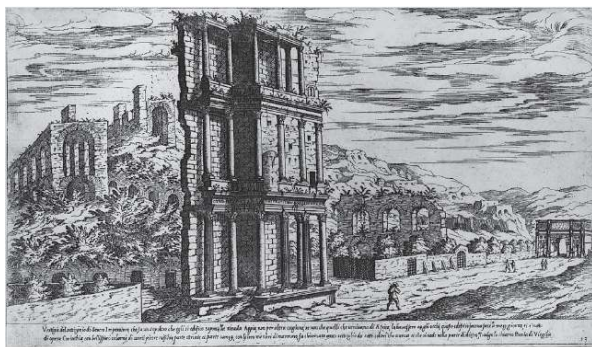


Fig. 8 Étienne Du Pérac, Septizonium, perspective view from the south. Engraving taken from *I vestigi dell'antichità di Roma raccolti e ritratti in prospettiva*, Roma, 1575, fol. 13 r.

Whereas this method was applied for the general dismantling and described by Fontana at the very beginning of the document, the following sections differ in that Fontana specifies the architectural type, material and location at the building site. Thus, in section 3 he mentions “la calatura di n(umero) 18 colonne”, a passage which is especially important for reconstructing the status of the building between 1575 and in 1588/1589.²⁸

In his drawing Marten van Heemskerck carefully depicts the fragile condition of the broken frieze in the eastern flank of the third story (Fig. 4). This upper section of the building is a neuralgic point with regard to the number of columns, because there exist many different versions by different draftsmen of what was left at slightly different times. In the first half of the sixteenth century Heemskerck basically depicts the third story as featuring three front columns and one flanking column as well as a medieval brick structure. So he provides basically the same parameters as those represented in the engraving by Étienne Du Pérac from 1575 (Fig. 8).²⁹

Of particular interest in this third passage of the *conto* of Fontana is that he mentions the number of columns, but not their material. One could ask why this was not considered important here, whereas an anonymous author in the *Codex Veronensis* gives

28 Stevenson 1888, 282: “In un disegno del Dosio da S. Geminiano (sec. XVI), in altro di un anonimo contemporaneo, e nella incisione del Dupérac (1575) troviamo costantemente nel piano inferiore sette colonne, in quello di mezzo sei, e nell’ultimo altrettante.” A comparison of pictorial documents of the Septizonium from this period reveals that the number of columns shifts between 18 and 22. The actual number is still a subject of debate. Perhaps this question could be illuminated and settled by the passage by Fontana in section 3 where he writes “erano parte rotte e brugiate del tempo et per quello essere andati in diversi pezzi”, so that the definition

of a column could be expanded to include *a part of a column*.

29 Du Pérac 1575, fol. 13 r, URL: <http://census.bbaw.de/easydb/censusID=43953> (visited on 19/07/2014), is the last known view of the Septizonium. In the upper part Du Pérac shows basically the same situation as in the drawing by Marten van Heemskerck, so we count 22 columns in 1575. Fontana speaks of 18 columns, but it is unclear if he did also count the partially broken pieces of columns, cf. Capsa 10.108, fasc. II, fol. 10 (3). Stevenson 1888, 282 suggests that the four missing columns vanished, were destroyed or broke down after 1575, cf. Lanciani 1992, 151.

the most exact observation as “di varie sorte di pietra cioè di porfido rosso e bianco, di granite rosso e bigio, di marmo pavonazzo e di bigio e di bianco”.³⁰ Furthermore, Vincenzo Scamozzi describes in his “Discorsi sopra l’antichità di Roma”, published in 1582, the Corinthian order of the columns as well as their surface and material.³¹ One answer could be that Fontana wasn’t thinking primarily of the material here but rather of the architectural type and how it could be reused. An argument supplied by the document itself consists in the fact that in later sections he classifies damaged pieces of the columns as unusable at certain building sites and some as completely unusable.³² This shows that those pieces of material were handled in a very rational, logistical and economical way. The pieces were viewed primarily from a utilitarian perspective. Again, it should be born in mind that the *conto* of Fontana has the character of a scheduled bill; detailed descriptions of individual architectural pieces are not to be found there.

Sections 4 to 9 of Fontana’s *conto* refer to subterranean work, from the basement to the layer of pebbles. His description can be classified as stratigraphic and volumetric, in that he describes the layers of peperine and travertine and their metric dimensions in the order in which they are extracted. He reduces the material entirely to its volume, except when there are extraordinarily large pieces of stone, which could be reused for special purposes.³³

These sections also exhibit another very interesting aspect: they emphasize the difficulties involved in the excavation work. While Fontana neglects to describe the material aspects of the extracted pieces, his *conto* includes aspects of the work itself. He writes of “un filo di trevertino [...] qual girava intorno alla platea fatta da selci durissimi et cativi da cavare”.³⁴ This refers to the enhanced work force that had to be organized to cope with the difficult situation underground. It focuses on time constraints, which can be shown as follows: The excavation of an average layer of travertine of “lon(ghezza) p(almi) 51 lar(ghezza) p(almi) 51 alt(ezza) p(almi) 3 ½” costs 45 scudi for 303 cartloads (carrette).³⁵ But the price rises for a long and narrow layer of travertine that is very hard to excavate: “lon(ghezza) intorno p(almi) 116 lar(ghezza) p(almi) 5 ¼ al(tezza) p(almi) 3 1/3.” 67 cartloads cost 27 scudi.³⁶ Thus, a fourth of the volume costs approximately twice as much as the same quantity from an average layer. Fontana clearly recognizes

30 Anonymus, Cod. Veron 441, 1610, cited by Hülsen 1866, 5, n. 1; 15, n. 13. Gamucci 1565, fol. 82 r, writes of “colonne di diverse pietre, di granito e di porfido, striate e senza strie”, cited by Hülsen 1866, 12.

31 Scamozzi 1582, 24.1: “tutte [...] sono di bellissimi graniti, et marmi, parte bianchi, et parte misti, di queste sono le superiori di maravigliosa bellezza”, cf. Scamozzi 1582, cited by Hülsen 1866, 13 and Iacopi and Tedone 1993, 155, n. 12.

32 ASV, Capsa 10.108, fasc. II, fol. 10 (3): “quali se ne sono serviti in diversi luoghi per le fabbriche e parte ve ne sono che serviranno”.

33 Ibid. fol. 10 v (7): “levato et cavato di sotto terra un altro pezzo al paro del detto che faceva la platea simile” (e.g.).

34 Ibid. fol. 10 v (8).

35 Ibid. fol. 10 v (6): “fa caret(ate) 303 [...] sc(udi) 45,51”.

36 Ibid. fol. 10 v (8): “fa caret(ate) 67 [...] monta sc(udi) 27,06”.

that more time, working material and manpower are required here, so he no longer refers to the quality of the work in general, but to the specific aspect linking work with time. It is not the pure volume of the travertine layers that is important, but rather the effort involved in excavating these layers, as is indicated in the sequence “*piatea fatta da selci durissimi et cativi da cavare*”³⁷

4 Interim storage of the dismantled material

Dismantling the Septizonium caused a new problem: the interim storage of the material. Interim storage meant designating a certain volumetric space to store the dismantled material over a certain period of time. Fontana describes this as follows: “*tirato for a di sotto terra un altro filo di peperini et trevertini [...] et tirata da la banda lontana per la detta strada con l’argano per poter accomodare li altri*”³⁸ The peperine and travertine stones were extracted with a winch and arranged along the street. The last part of the sentence is important, because it indicates the need to plan for the future. While work is in progress, space has to be left open for interim storage. This space has to be connected to the dismantling site itself as well as to the logistical system of the transport roads, and it has a definite end: to begin transporting the pieces to their final destination. The storage space is indicated as “*lontana per la detta strada*”, which means the dismantled pieces have been placed along the roadside.

To shed light on this from a topographical perspective we have to look at the surroundings of the monument in 1588–1589. As can be seen in the engraved map of Rome ca. 1577 by Étienne Du Pérac (Fig. 9) the east wing of the Septizonium was isolated at that time and stood in a system of crossing streets. Four main directions can be discerned: First, the *strada di S. Gregorio*, named after the monastery at its southern end and leading to the former Forum Romanum and the Colosseum. Second, the direction leading to the former Forum Boarium – at that time an important harboring site for shipping materials on the Tiber and on their way to New St. Peter’s. From the west runs the *Via Ostiense*, which was not as important then as in antiquity because of the decline of the harbor of Ostia. And finally, from the South runs the *Via Appia*, which was still very important because of its connection to the Campana, Capua and Naples. So the Septizonium stood at an important hub, the southwestern main entrance to the city of Rome. This means that the Septizonium had to be dismantled to conform to urban traffic and transportation requirements. The interim storing of the dismantled material was therefore not only a problem of space, it was also linked to the necessity of maintaining a functioning logistical system.

37 Ibid. fol. 10 v (8).

38 Ibid. fol. 10 v (6).

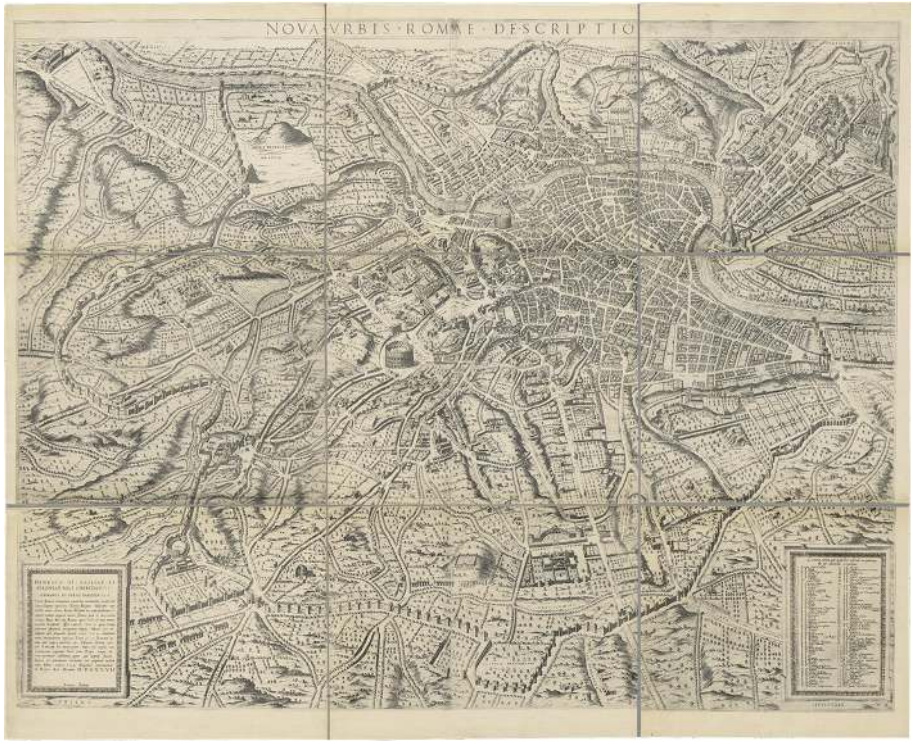


Fig. 9 Étienne Du Pérac, Antoine Lafréry, *Nova urbis romae descriptio*, Septizonium: right half, middle, 1577, engraving.

If the dismantled material was collected around the site of the Septizonium it could have been organized along the Via di S. Gregorio according to Fontana. There are still other ways the dismantled material could have been arranged. First, it could have been temporarily stored on the south end of the street in the garden of the monastery of S. Gregorio,³⁹ which may have been used as a vineyard at this time. Second, Du Pérac's engraving depicts a piece of land east of the Septizonium surrounded by a wall and containing a building with two flanks. It, too, seems to be a garden or vineyard. And third, along the foot of the Palatine hill, northeast of the Septizonium, there may also have been a place for interim storage. Before the triumphal entry of Charles V in 1536

39 Lanciani 1992, 150: "[...] Stevenson crede che i blocchi di peperino, di travertino e marmo sieno rimasti ad ingombrare la piazza di San Gregorio per parecchio tempo ancora, non essendo vi dubbio che nell'ultimo anno del pontefice vi si andava

tuttora a cercare materiale". This lack of the sources can be partially resolved by the *libretto* of Giannipietro *carrettiere di marmi*, Archivio di Stato di Roma, Camerale I, Giustificazione di Tesoreria, busta 17, fascicolo 8.

the Septizonium itself stood partly in the vineyard of Girolamo Maffei.⁴⁰ The vineyard was sold on February 4, 1536 to Latino Giovenale de Manettis and logistical changes had to be made to direct traffic; this meant that the street along which Charles V made his entry traversed the vineyard of the Septizonium.⁴¹ Fontana's *conto* mentions a vineyard near the Septizonium just once, in specifying the position of a travertine plate that had been dug up, and which "sprang back in its position in the direction of the garden"—"un altro pezzo [...] faceva resalto verso l'orto".⁴² Consequently, the piece must have extended either to the south towards the garden of the monastery of S. Gregorio or to the west, where a garden is indicated on the map by Du Pérac. It can therefore be concluded that Fontana may have temporarily stored the dismantled pieces not only along the street of S. Gregorio⁴³ but also in one of these gardens or vineyards.

Another interesting entry referring to a "vigna" (vineyard) in the context of the spolia of the Septizonium can be found at the very end of a document from the *Archivio di Stato di Roma*. The little booklet (*libretto*) is titled "Portature di Gio: Pietro Carattiere di Marmi,/ statue, et altro nel Pontificato di Sisto V".⁴⁴ It is issued as a *conto*, a bill, to the Treasure Chamber of the Vatican and is dated July 29, 1589.⁴⁵ As already mentioned, Stevenson, the Vatican librarian, cited the *conto* of Domenico Fontana to show that the dismantling of the Septizonium took place between March 1588 and April 1589. This means that the pieces of stone were temporarily stored for at least a few months.⁴⁶ Even greater precision is possible here, because the stone carter Giovanni Pietro began measuring the pieces on April 6, 1588 until the *conto* ended in July 1589.⁴⁷ Each piece was first measured (he writes "mesurati p[er] me"⁴⁸) and its cubic volume calculated before it was transported. These measurements must have been made several times, not necessarily within the same time period, but in the course of the processes at the dismantling site itself. The pieces were therefore measured for the first time right after Fontana started

40 Bartoli 1909, 258; cf. Lanciani 1902, 200.

41 Ibid.; cf. Orbaan 1911, 237: "(... the emperor should) reach San Sebastiano by the still existing Via delle Sette Chiese [...]. Then, at the first sharp turn of the Via Appia, inside the wall, where the wide road passed straight through vineyards, he could see on the one hand the 'Settesolie' [...]"

42 ASV, Capsa 10.108, fasc. II, fol. 10 v (7).

43 ASR, Provvti del camer(leng)lo, tomo 1587–1588, c. 155: from February 4, 1588 on Francisco de Tosesti obtained a licence to dig along the Via di S. Gregorio "[...] in via publica qua itur ad S(an)ctum Gregorium ab arcu Constantini incipiendo subterranea loca per quirire ac quoscunque lapides marmoreos porfiriticos Tiburtinos figuratos [...] excavari"). So these excavations could have disturbed the interim

storage of the dismantled material of the Septizonium along the Via di S. Gregorio in an eastern direction towards the Arch of Constantine.

44 ASR, Camerale I, Giustificazione di Tesoreria, busta 17, fascicolo 8, fol. 1 r.

45 Ibid. fol. 1 r.

46 Cf. n. 39: Stevenson believed the pieces to have remained after their dismantling for a very long time around S. Gregorio.

47 ASR, Camerale I, Giustificazione di Tesoreria, busta 17, fascicolo 8, fol. 1 r: "[...] comenzando (?) sot/li 6 di Ap[ri]le 1588. sino al presente giorno sopra d.to come qui sotto si uede destintamen/ te mesurati p[er] me sotto scritto E p.a."

48 Ibid. fol. 1 r.

dismantling them and for the last time shortly after he finished, so that this can be classified as a related process. It accompanied the destructive work and extended beyond it to deal with the material effects of the main dismantlement process.

In the very last folio of the *libretto* a “vigna” for 85 *scudi* (Fig. 10) is listed under total costs.⁴⁹ To this is added 419 *scudi* for “diversi lavori”, yielding a sum of 504 *scudi* due. From this sum, 200 *scudi* are subtracted as already paid, leaving a remainder of “resta 304 *scudi*.”⁵⁰ This sum has to be paid to Gio(vanne) Pietro. It is an interesting problem how one should interpret the sum of 85 *scudi* paid to the carter for the “vigna”. Comparing the *libretto* of Gio(vanne) Pietro to the *libri dei conti* of Domenico Fontana, there is an entry which could correspond to the *libretto*, especially the sum for the *vigna* and the “diversi lavori”. The *libro dei conti* lists the “Vigna di Nostro Signore,”⁵¹ which means the garden of the villa of cardinal Felice Peretti, pope Sixtus V.⁵² There is an entry on page 16 of the *libro dei conti* 1585–1589 concerning 85 *scudi* paid to Gio(vanne) Pietro for carting different stones from various sites to this *vigna*, apparently before August 1589.⁵³ This would mean that various stones were collected or temporarily stored in the *vigna* of Pope Sixtus V. The entry in the *libro dei conti* of Domenico Fontana concerning the *vigna* of Pope Sixtus V occurs around the same time as the entry about the *vigna* in the *libretto* of Gio(vanne) Pietro, whose work in measuring and transporting ended, according to the document, at the end of July 1589. The presence of this entry in the *libretto* of Gio(vanne) Pietro can be explained within the larger context of all costs and calculations. It does not necessarily mean that stones from the Septizonium were temporarily stored in the *vigna* of Pope Sixtus V, especially since this would require them to be transported twice: first to the *vigna* and then to their final destination. There is no further evidence of this. It must be concluded that the entry concerning the *vigna* in the *libretto* refers to general transportation work by Gio(vanne) Pietro. It could be that some pieces of the Septizonium reached that *vigna* but were not measured and listed in the *libretto*. Furthermore, the *libro dei conti* reports that those stones came from various directions, “più luoghi.”⁵⁴

The sum of 85 *scudi* amounts to almost a quarter of the sum for all other transportation work listed in the *libretto*: 441 *s(cudi)* 28 *baiocchi* (reduced to 419 *s(cudi)* by the treasure chamber).⁵⁵ So the quantity of stones transported to the *vigna* should not be underestimated. We can try to evaluate this in terms of the average costs: one cart of 30

49 Ibid. fol. 11 r.

50 Ibid. fol. 11 r (bottom right on folio).

51 Guidoni, Marino, and Lanconelli 1986, 54 (transcription): p. 15 “Vigna di Nostro Signore”.

52 The garden of the Pope and palazzo Peretti were situated northeast of S. Maria Maggiore, cf. Schiffmann 1985, 31–32, with reference to Massimo 1836.

53 Guidoni, Marino, and Lanconelli 1986, 55 (transcription): p. 16 [...] “Gio(vanne) Pietro carettiere per diverse pietre portate da più luoghi alla vigna, come in un conto saldato a di 19 d’agosto 1589, ch’è apresso meser Hermes s.(cudi) 85”.

54 Cf. n. 53.

55 ASR, Camerale I, Giustificazione di Tesoreria, busta 17, fascicolo 8, fol. 10 r.



Fig. 10 Archivio di Stato di Roma, Camerale I, Giustificazione di Tesoreria, busta 17, fascicolo 8, fol. 111 r, Roma.

palmi cubici equals 0.5 *scudi*,⁵⁶ so 85 *scudi* equals 170 cartloads of 30 *palmi cubici*. The total volume of the stones transported to the *vigna* equals 5100 *palmi cubici*. For example, the volume of all the travertine stones transported from the Septizonium to the Obelisk of the Piazza del Popolo equals 3875 *palmi cubici* and 119 carts, approximately one third less than the stones brought to the *vigna* of Pope Sixtus V. When considering why such a quantity of stones would have been collected in the *vigna*, it should be born in mind that in that time marble storage and stocks were proliferating.⁵⁷ This may also have been the case here. However, this possibility is ruled out by passages referring to the *vigna* in the *libro dei conti* of Domenico Fontana. There the architect is paid for work in the *vigna*, such as erecting walls and pilasters that was executed before July 1589.⁵⁸ It therefore

56 Ibid. fol. 9 v: "Li peperini portati dal settizonio al d.to lauatore sonno 6064, che sonno ca(arreta)'te 202 p 04. al 48. p ca(retta)'ta montasc(udi) 97 (baiocchi) 20" (basis for determining the approximate average cost of 0.5 *scudi* for one caretta).

57 See Hermann Schlimme in this volume.

58 Guidoni, Marino, and Lanconelli 1986, 54 (transcription): p. 15 "Vigna di Nostro Signore [...] il medesimo (Domenico Fontana) per altri muri intorno la vigna, come in un altro conto saldato a di 20 di luglio 1589 [...] Il medesimo (Domenico Fontana) per pilastri e muri et altri diversi lavori

seems that the stones were reused in the *vigna* itself. Nevertheless, it is interesting that apparently not all dismantled pieces of the Septizonium have been registered. The entry concerning the *vigna* in the *libretto* of Gio(vanne) Pietro hints that a larger amount of material, perhaps also from the Septizonium, was used for the private garden of the Pope himself.

To return to the question of the interim storage of pieces of the Septizonium, the main answer is given by the architect himself in his *conto*. Fontana had to invent a flexible system to arrange the pieces based on the absolute volume of the underground portion of the basement of the Septizonium without disrupting public transport or the dismantling process. Thus, he had to consider space for storage and for smooth working processes. What system did he develop to arrange the pieces? In his own words: “lontana per la detta strada.” He combined existing logistical structures with the material instead of mounting the pieces at one site. This ensured a high level of flexibility, which classified the pieces, both in terms of their original provenience *and* how they would be transported. This flexible duality enabled a number of additional processes to take place. For example, the pieces could be cut at the interim storage level and rearranged to optimize their size for transportation, or their construction value could be estimated. The interim storage level could be defined in this context as a hybrid moment. The pieces had been dismantled and were awaiting reuse. They had no specific place yet, but were referred to as building material to in the interim storage system; they became “neuralgic hubs” in a flexible and changing interim storage structure. The heavier and more monumental they are, the less likely they are to be moved away. So these pieces themselves define the structure of the interim storage space.

What does the way the Septizonium was dismantled reveal about the use and reuse of its building material? We have cast light so far on the dismantling and interim storage processes. The following brief conclusions can be drawn at this point:

First, the dismantling can be seen as a logistical and rational process based on building techniques. The symbolic value of the pieces is not considered here. Second, the pieces are primarily dismantled for their material and volume, so the focus is on their reusability. Third, several pieces are dismantled to be sent to a specific destination based on the type of material, for example marble or precious stone. This is true of several marble plates and the column shafts. Only these pieces can be assumed to have had aesthetic value, but it is still very problematic to assume that they had symbolic value. To sum up, everything points to an economic, rational and utilitarian process.

dentro la vigna, come in un'altro conto saldato a di
20 di luglio 1589 [...].”

5 Transportation of the dismantled pieces to their final destination

The administrative duties of the architect Fontana also included commissioning the interim stored pieces of the Septizonium to be transported by a carter of stones. The carter was responsible for documenting the pieces and transporting them to their final destinations. Fontana had to delegate this task to a professional equipped with specific transportation facilities. In the case of the Septizonium he commissioned a carter of marble and stones named Gio(vanne) Pietro to transport the pieces. Pietro documented this in his booklet (*libretto*) titled “Portature di Gio: Pietro Carattiere di Marmi,/ statue, et altro nel Pontificato di Sisto V”, dated July 29, 1589 and given to the Treasure Chamber of the Vatican.⁵⁹

The length, width and height of each dismantled piece was measured by Gio(vanne) Pietro himself and documented in the *libretto*.⁶⁰ The booklet is organized as follows: each section begins with the provenience, material and destination of a piece. For example, the first entry on fol. 1 r reads: “peperini portati da Monte Cauallo al lauator di Termine”.⁶¹ The transportation services are summarized in a larger volume, “summario delle dietro scritte portature.” Fol. 9 v/ 10 r shows that most of the transports were from the site of the Septizonium to various destinations.⁶² Some of the transports started in Monte Cavallo or the Capitoline Hill and smaller transports can be found that comprise single entries in the *libretto*, for example material from the Septizonium for the Casa dei Mendicanti at the Ponte Sisto.⁶³

In his second entry in the *libretto* the stone carter Giovanni Pietro lists 98 pieces of “Peperini portati del sette Zonij al d.to lauatore.”⁶⁴ Sixtus V started building a lavatory for the wool industry at the Baths of Diokletian at Termini⁶⁵, apparently using 6064 *palmi cubici* of peperine stones from the Septizonium for that purpose.

First of all, it is interesting that so many pieces were transported. They were designated based on their volume in *palmi cubici* and divided into several amounts with reference to a specific number of pieces. So the first section comprises 10 peperines with a cubic volume of 908 *palmi cubici*, the second section consists of 35 pieces of 2390

59 ASR, Camerale I, Giustificazione di Tesoreria, busta 17, fascicolo 8, fol. 1 r.

60 Ibid. fol. 1 r: “[...] mesurati p(er) me [...]”

61 Ibid. fol. 1 r.

62 Ibid. fol. 9 v: “[...] da Monte Cavallo all’lauatore di Termine [...]”; “[...] dal settizonio al d.to lauatore [...]”; “[...] dal settizonio [...] al Saluatore di S. Gio: [...]”; “[...] dal settizonio [...] alla Colonna Antonina [...]”; “[...] dal settizonio a d.ta Colonna [...]”; “[...] da monte Cauallo a d.ta Colonna Antonina [...]”; “[...] dal settizonio alla Guglia del Popolo”; “[...] da

Campidoglio p(er) [...] la guglia del popolo [...]”; “[...] dal settizonio [...] a S.ta Ma.a Mag.re [...]”; “[...] dal settizonio al Saluatore di S. Gio: laterano [...]”; fol. 10 r: “al settizonio [...] alla colonna [...]”

63 Ibid. fol. 3 r: “Per hauer fatto cinq(ue) uiaggi de scaloni abbozzati fatti fare p(er) la Casa de Mendicanti a Ponte Sisto tolti dal settizonio e portati in d.to loco [...]”

64 Ibid. fol. 1 r–3 r.

65 Schiffmann 1985, 33.

palmi cubici, the third section of 22 pieces of 1062 *palmi cubici*, the fourth section of 21 pieces of 1197 *palmi cubici* and the fifth and final section of 8 pieces of 508 *palmi cubici*.⁶⁶ In the *conto* of Fontana, one cart comprises on average 30 *palmi cubici*.⁶⁷ Translating the number of pieces into the number of transportation cartloads, the first section of the document reveals 30 cartloads the second ca. 80 carts, the third 35 carts, the fourth 40 carts and the last 17 carts, for a total of 202 carts, as indicated in the summary of the transports in the *libretto*.⁶⁸ This means approximately 200 cartloads were driven from the Septizonium to the lavatory of Termini.

The second interesting point concerns the distance between the two. Basically there are two main routes the carter could have taken. On the one hand, he could have steered towards the Colosseum and the column of Trajan turned from there towards S. Maria Maggiore on a street that was built starting in 1585⁶⁹ and is labeled today as Via Panisperna. So the carter reached the “lavatore” from the northwest. This assumes that this was a main traffic route that was also highly affected by the ongoing construction work pope Sixtus V had commissioned. On the other hand, Gio(vanne) Pietro could have crossed mons Caelius keeping east of the Colosseum and the Colle Oppio and reaching eastern S. Maria Maggiore partially along the Via Merulana, a street which was still being built under Sixtus V.⁷⁰ From Santa Maria Maggiore he would have chosen approximately the same route, the Via Panisperna, to the lavatory at Termini. The total distance, depending on the route, is about 3 and a half to 4 km. Compared to the other destinations to which the dismantled and spoliated pieces of the Septizonium were sent, this is an average distance. For example, the route from the Septizonium to the Antonine Column would also have been 2 and a half to 3 km, while the route to S. Giovanni in Laterano would have measured approximately 3 km. We have to consider that first of all the volume of one cart determines the number of available transportation routes. This is an oscillating variable, because the distances differ only slightly. If more spolia from the Septizonium were reused at one site, the number of carts and the transportation costs were correspondingly higher.

The third point involves shifting attention from the transportation distances to the quality and efficiency of transportation. How could this be measured? Is it linked to financial aspects?

In fol. 3 r of the *libretto* by Giovanni Pietro the carter allots 1 *scudo* for the transportation of each of the “lastroni di marmo”, marble plates, in a cart pulled by four horses.⁷¹

66 ASR, Camerale I, Giustificazione di Tesoreria, busta 17, fascicolo 8: first section: fol. 1 r, second: fol. 1 v, third: fol. 2 r, fourth: fol. 2 v, fifth: fol. 3 r.

67 ASV, Capsa 10.108, fasc. II, fol. 9–11 (determined by comparing and calculating).

68 ASR, Camerale I, Giustificazione di Tesoreria, busta 17, fascicolo 8, fol. 9 v: “Li peperini portati dal setti-

zonio al lauatore sonno 6064. che son/no ca'te 202 p 04. al 48. P ca'ta monta sc. 97.20”

69 BV Vat. Lat. 12142 fol. 290 v, published in Schiffmann 1985, 31; cf. 29; cf. Fulvio 1588, fol. 197 v.

70 Schiffmann 1985, 43; cf. Fontana 1590, fol. 5 r, fol. 88 r (earth works and walls along the Via Merulana).

71 ASR, Camerale I, Giustificazione di Tesoreria, busta 17, fascicolo 8, fol. 3 r: “Per la portatura di u° las-

Therefore, the price of this transportation service differs from the average cost of half a *scudo* per cart as was determined in the case of the peperine transport from the Septizonium to the lavatory of Termini.⁷² It is also interesting that a more precious marble than peperine in the shape of plates is recorded differently in the *libretto*. Unlike the entries for large amounts, for example 98 pieces of peperine for the lavatory at Termini, these single entries are highly precise. They specify how many pieces of which shape and material were transported to which destination by how many horses.⁷³ This is primarily due to the fact that those materials, for example marble plates or pre-fabricated stairs, were destined to fulfill a highly distinctive function, for example as an inscription panel, as a coat of arms of Sixtus V or as staircase steps in the Casa dei Mendicanti near the Tiber at Ponte Sisto.⁷⁴

At this point it becomes clear that the material qualities of the pieces mattered when they perfectly suited a highly specific purpose. A parallel to Fontana's *conto* can be observed: quality is mentioned as important when it affects the immediate process; as the "selci durissimi e cattivi a cavare"⁷⁵ influenced the dismantling process, so the "lastroni di marmo" in the *libretto* of Giovanni Pietro influenced the amount of care to be taken and the specific conditions to be observed during the transportation process. Being more related to the question of spolia and the reuse of building material, this points also – on a different qualitative level – to the utility of the material. It can be categorized in general as a utilitarian focus.

In general – as we can see from the aforementioned fol. 11 r (Fig. 10) – the carter Gio(vanne) Pietro was paid a total of 419 *scudi* for transportation services.⁷⁶ He was paid 40 *scudi* per month beginning on August 4, 1588, continuing through October, November, December and ending at the end of March 1589, which totals 200 *scudi*.⁷⁷ It is interesting to observe that between January and March no regular payment was made. This could be due to delays in excavation work, as suggested in Fontana's *conto*: the pieces first had to be cut in the pit and then hauled out using winches.⁷⁸ Further causes for the lack of transportation services and hence the lack of payments could also be found in a period of "maltempo," heavy rains hindering excavation works, in new tasks assigned to the carter Gio(vanne) Pietro by other commissioners or merely in the

troni di marmo p[er] far le scritione/ sopra la porta di d.to lauatore tolto dal settezonij u' 4./caualli et cond.to al d.to lauatore monta. sc. 1"

72 Cf. note 56.

73 Cf. ASR, Camerale I, Giustificazione di Tesoreria, busta 17, fascicolo 8, fol. 3 r: "Per haver fatto cinq(ue) uiaggi de scaloni abozzati fatti fare p(er) la Casa di Mendicanti a Ponte Sisto tolti da settizonio e portati in d.to loco p(er) far le scale delle stantie delli dormitorij u' Quattro Cavalli p(er) uiaggio chetutti cinq(ue) insieme montano sc. 4"

74 Ibid. fol. 3 r.

75 ASV Capsa 10.108, fasc. II, fol. 10 (8).

76 Ibid. fol. 10 r: "[...]alla so'ma di scudi quattrocento quarant'uno (baiocchi) 28 di m.ta Reduciamo il soprade.o Conto a scudi quattrocento diecinoue cosi in tanto lo saldiamo p(er) la detta so'ma di (scudi) 419 [...]"

77 Ibid. fol. 11 r (bottom right on the folio).

78 ASV, Capsa 10.108, fasc. II, fol. 10 (4-10): sections 4-10 refer to excavation works "di sotto terra".

fact that the pieces were temporarily stored for long periods. But transportation of the dismantled Septizonium material was a cost factor that must have been calculated. It constituted a relatively large percentage of the total balance of the *conto* of Domenico Fontana for the dismantling of the Septizonium, which amounted to almost 1000 (994) *scudi*. Transporting the spolia cost a total of 419 *scudi*, almost half of the price of the dismantling work. From this we can further conclude that the focus in transportation was not on the distances but on the value of the material, the dismantled pieces.

The transportation of building material from the Septizonium in Rome can in general be said to have been almost completely bound and linked to the building activities of Sixtus V and his architect. Very few pieces were given to private individuals or artists.⁷⁹ Concerning the distances that were seen as necessary to get the materials to their destination site, the only important factors were the value of the material and the building site where the spolia were reused. And those sites are illustrative: basements of obelisks, ancient monuments, Renaissance palazzi, Papal churches and chapels.⁸⁰

Finally, these observations should be connected with the general development of specialization in the technical organization of constructive and destructive processes in building during the Renaissance. As can be shown by comparing payroll lists for workers on medieval cathedral building sites, it became less common to pay an average wage based on sheer manpower and more common to offer more pay for specific, skilled work.⁸¹ This diverging process can also be observed in the dismantling of the Septizonium: the architect gradually comes to assume the role of a technical and organizational supervisor delegating specific, skilled tasks to specialized workers.

In conclusion, it can be said that in the case of the dismantling of the Septizonium this development also affects the process of spoliation. This process should not be seen as a unified whole, but as a multi-step system implemented by specialists. It can be compared to an early industrial process, one connected to the urban system mainly through the logistical network supported by the spatial organization of the city of Rome. It was organized, highly rational and economic, primarily due to the logistical, organizational, engineering and technical skills of the architect Domenico Fontana. In his book about the erection of the Vatican Obelisk this can be observed clearly, despite all the self-promotion.⁸² The dismantling of the Septizonium by Sixtus V and Domenico Fontana was in the specific cases examined here, a rational, economical and utilitarian process.

79 ASR, Camerale I, Giustificazione di Tesoreria, busta 17, fascicolo 8, fol. 7 r: "Per la portature de 2. pezzi de marmi molti al settizonio e portata alla bottega di m.re Mutio a segare p(er) far li termini et festoni che sonno messi ad.to hornamento della

statua, quali poi sonno stati portati da li a S.ta Maria Mag.re dove son stati poi finiti d.ti pezzi [...]"

80 Cf. n. 62.

81 Binding 1993, 168 (comparison of payment: differing for specific, skilled tasks).

82 Fontana 1590.

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